

## Notes on the spider genus *Symphytognatha* (Araneae: Symphytognathidae) in Western Australia

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**Abstract** – New distributional records are given for *Symphytognatha picta* Harvey, and a new species, *S. fouldsi*, is described from a cave situated in Nambung National Park.

### INTRODUCTION

The symphytognathid fauna of Australia has been little studied, with only five described species: *Symphytognatha globosa* Hickman, 1931 from Tasmania, *S. blesti* Forster and Platnick, 1977 from New South Wales, *Anapistula australis* Forster, 1959 from Queensland, *S. picta* Harvey, 1992 and *A. troglobia* Harvey, 1998 from Western Australia, and *A. bifurcata* Harvey, 1998 from Northern Territory (see Forster and Platnick, 1977; Harvey, 1992, 1998). Amongst material recently accessioned by the Western Australian Museum were two specimens of *Symphytognatha* taken from a cave some 180 km to the north of Perth which were clearly different in morphology from *S. picta*, the only other species of the genus recorded from Western Australia. Detailed examination of the specimens shows that it represents a distinct species most similar to *S. blesti* from New South Wales.

The specimens examined as part of this study are lodged in the Western Australian Museum (WAM). The terminology used for the pedipalpal conductor lobes follows Harvey (1992).

### SYSTEMATICS

Family Symphytognathidae

Genus *Symphytognatha* Hickman

*Symphytognatha picta* Harvey

Figure 3

*Symphytognatha picta* Harvey, 1992: 685–689, figures 1–6.

#### New Material Examined

Australia: Western Australia: 1 ♀, Dog Pool, Shannon National Park, 34°46'S, 116°22'E, 23 March 1993, sweeping vegetation, M.S. Harvey, J.M. Waldock (WAM 97/2560); 1 ♂, Jarrahdale,

minesite, 32°17'S, 116°08'E, April 1998, suction sample, K.E.C. Brennan (WAM T41515); 1 ♂, same data except pitfall trap (WAM T41516); 1 ♀, same locality, April 1999, suction sample, B. Moir (WAM T41517); 1 ♀, S. of Torbay Hill, West Cape Howe National Park, 35°05'S, 117°38'E, 27 March 1993, sweeping vegetation, M.S. Harvey, J.M. Waldock (WAM 97/2561).

#### Remarks

The distribution of *S. picta* extends along the south coast of Western Australia (Figure 3) where the high rainfall favours the retention of moisture dependent species (Hopper *et al.*, 1996), but an outlying population has been recently found near Jarrahdale by Mr Karl E.C. Brennan (Curtin University of Technology). This disjunction is very similar to that of the south-western Australian endemic *Ambicodamus marae* Harvey (Nicodamidae), which was found by Brennan (1999) to be prevalent along the south coast with outlying populations situated in the northern jarrah forest at Jarrahdale and Mt Cooke. The habitat and collecting methods of the Jarrahdale site were described by Brennan (1999).

*Symphytognatha fouldsi* sp. nov.

Figures 1–3

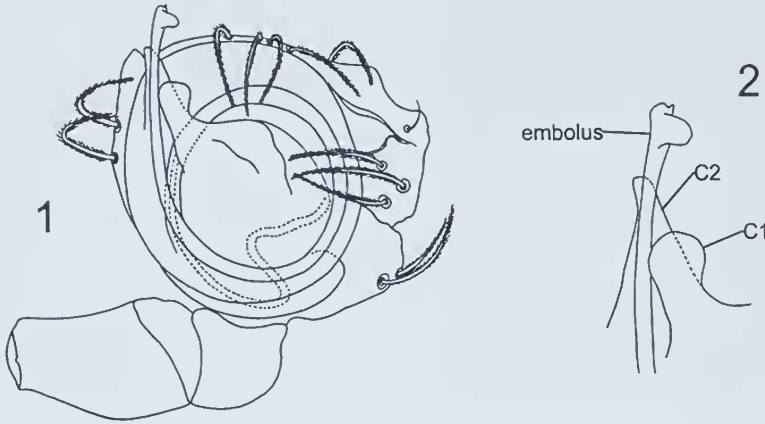
#### Material Examined

##### Holotype

♂, Thousandman Cave, SH-7, Nambung National Park, Western Australia, Australia, 30°30'S, 115°10'E, 27 September 1998, from web on roof ledge, R. Foulds (WAM T40852).

##### Paratype

Australia: Western Australia: 1 ♂, same data as holotype, except from web strand over runnel, edge of daylight zone (WAM T40853).



Figures 1–2 *Symphytognatha fouldsi* sp. nov., holotype m, left pedipalp: 1, retrolateral; 2, detail of embolus and conductor lobes. Abbreviations: C1 (ventral conductor lobe), C2 (dorsal conductor lobe).

### Diagnosis

Males of *S. fouldsi* appear to be most similar to those of *S. blesti* as both possess a long embolus which extends well past the conductor lobes and which is furnished with an expanded tip. However, in *S. fouldsi* the ventral edge of C1 is rounded and does not form a 90° angle at the tip (it is straight and forms a 90° angle in *S. blesti*), and the dorsal edge of C2 is rounded (it forms a sharp point in *S. blesti*).

### Description

#### Male

Colour: carapace dark dusky brown, pars cephalica darkest; sternum dark brown; abdomen mostly purple-grey with broad irregular median pale stripe and irregular lateral pale stripes directed ventrally; chelicerae and legs light brown. Carapace with 10 long setae, 1 on clypeus, 1 between PME, 1 pair mesad to ALE, 1 pair mesad to PLE, and 4 on posterior ridge of pars cephalica; clypeus slightly oblique. Six eyes, AME absent, grouped in three diads. Chelicerae fused for most of their length, suture line visible; each chelicera with 6 lateral, 2 mesal and 2 distal setae; distal lobe of fang furrow with 2 large teeth and 1 small tooth. Sternum posteriorly truncate. Pedipalp (Figures 1–2): trochanter with small subdistal seta, femur and patella without setae, tibia with 2 large and 1 small subdistal seta; subbasal paracymbium present with 3 large setae and deep dorsal notch; outer margin of cymbium with 5 lateral and 2 subdistal plumose setae which extend over bulb; embolus long, extending past conductor lobes, tip expanded with distal flange, situated between two conductor lobes; ventral conductor lobe (C1) with rounded distal and ventral margins; dorsal conductor lobe (C2) not hooked. Leg formula 4123; all patellae and tibiae

with dorsal erect bristle. Superior tarsal claws: I and II with 7–8 teeth, III and IV without accessory teeth; inferior tarsal claws I–IV long and slender. Colulus absent.

Dimensions (mm), m holotype: total length (excluding chelicerae) 1.16. Carapace length 0.44, width 0.40, height 0.31. Eyes: ALE 0.06, PME 0.04, PLE 0.06, PME–PME 0.02, PME–PLE 0.09, PLE–ALE 0.01, eye group width 0.32. Sternum length 0.29,

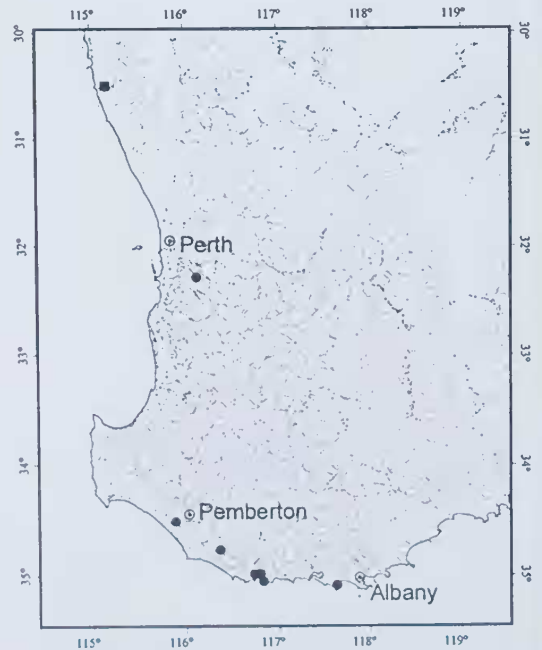


Figure 3 Map showing known records of *Symphytognatha* species in Western Australia. ● *S. picta*, ■ *S. fouldsi*.

width 0.22. Abdomen length 0.81, width 0.71, height 0.82. Pedipalp: femur 0.10, patella 0.07, tibia 0.13, tarsus 0.20, total 0.50. Leg I: femur 0.32, patella 0.15, tibia 0.19, metatarsus 0.17, tarsus 0.13, total 0.96. Leg II: femur 0.31, patella 0.13, tibia 0.20, metatarsus 0.15, tarsus 0.20, total 0.99. Leg III: femur 0.22, patella 0.15, tibia 0.17, metatarsus 0.12, tarsus 0.17, total 0.83. Leg IV: femur 0.32, patella 0.14, tibia 0.21, metatarsus 0.16, tarsus 0.21, total 1.04.

#### Remarks

All three previously described Australian species of *Symphytognatha* possess a distinct abdominal colour pattern which consists of a dark background with dorsal and lateral pale stripes (Harvey, 1992), and *S. fouldsi* fits into that group. *Symphytognatha fouldsi* shares considerable similarities with *S. blesti* from New South Wales, as males of both species possess a long embolus with an expanded tip (see Forster and Platnick, 1977), and they differ only by the shape of the conductor lobes.

The two known specimens of *S. fouldsi* were taken from Thousandman Cave, situated in Nambung National Park, although there is little to suggest that the species are restricted to caves, as they possess fully developed eyes and are not appreciably paler than other species of the genus.

#### Etymology

This species is named for the collector of the two specimens, Mr Rob Foulds, who has provided the Western Australian Museum with many important invertebrates from Western Australian caves.

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